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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/560,444

12/13/2005

Norimasa Furukawa

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EXAMINER

PHILOGENE, HAISSA

ART UNIT

PAPER NUMBER

2821

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/560,444

Applicant(s)

FURUKAWA, NORIMASA

Examiner

Haissa Philogene

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6 is/are rejected.
- 7) ☒ Claim(s) 2,5 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/13/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 6 is objected to because of the following informalities: In line 7, insert -- plurality of—between “a” and “bypass”. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pross et al., Patent No. 6,396,466.

Pross discloses in Fig.2 a constant current driving unit for constant current driving a plurality of series-connected devices or LEDs (9) by a pulse width modulating constant current driving circuit (5, 5, 11), comprising: a bypass circuit (5, 8, 10) including a plurality of switches (10) each connected in parallel with each of said series-connected devices (9); said bypass circuit including a control circuit (5) readable as a gate potential setting circuit for inherently affording to said switches a gate potential value via logic circuit (8) by setting the voltage required for operation of the devices such that, when the series-connected devices (9) are operating as normally, the switches (10) are in the off-state, said gate potential setting circuit inherently affording to said switches (10) another gate potential value via logic circuit (8) by setting the voltage required for operation of the devices such that, when the devices (9) are in the open state, the

switches (10) will be in a turned-on state. Pross does not explicitly disclose the switches being thyristors. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ well-known gated devices or thyristors as switches because it would ensure the prevention of the use of complex firing and commutation circuits or elaborate gate-timing systems, thereby improving the efficiency of the system.

Claim ~~4~~ is rejected under 35 U.S.C. 103(a) as being unpatentable over Pross et al in view of Lenko et al., Patent No. 4,915,478.

Pross discloses the claimed invention substantially as explained above except for a backlight light source unit for illuminating a display panel from a backside thereof. Lenko discloses in Fig.1B a backlight light source unit (10) for illuminating a display panel (20) from a backside thereof. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the backlight light source unit as taught by Lenko into the Pross type unit, because it would allow uniform illumination intensity and long battery life.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pross et al in view of Maeda, Patent No. 7,106,395.

Pross discloses the claimed invention substantially as explained above except for a color LCD apparatus comprising a light transmitting color LCD panel including a color filter and a backlight light source unit for illuminating said light transmitting color LCD panel from the back side thereof. Maeda discloses in Fig.1 a color LCD apparatus (10) comprising a light transmitting color LCD panel (11) including a color filter (see Col.10,

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lines 56-64) and a backlight light source unit (3) for illuminating said light transmitting color LCD panel (11) from the back side thereof (see Col. 10, line 66 and Col.11, lines 1-2). . It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the color LCD apparatus as taught by Maeda into the Pross type apparatus, because it would allow a highly visible display even in a bright environment.

Allowable Subject Matter

Claims 2, 5 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vollrath, Patent No. 6,858,994; Chikugawa et al., Patent No. 7,170,234; Sekiguchi, Patent No. 6,771,327; Biebl, Patent No. 6,515,434; Furukawa, Pub. No. 2005/0231459; Furukawa et al., Pub. No. 2006/0022616.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (571) 272-1827. The examiner can normally be reached on 8:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on (571)272-1662. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

hp

Haissa Philogene
Primary Examiner
A.U. 2821
Haissa Philogene